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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,214	09/16/2004	Daljit S. Ohbi	OHBI3001/REF	5192
23364 7590 04/20/2009 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314-1176				
EXAMINER				
O HERN, BRENT T				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
04/20/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/507,214

Applicant(s)

OHBI ET AL.

Examiner

Brent T. O'Hern

Art Unit

1794

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20, 22-27 and 37-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20, 22-27 and 37-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claims

1. Claims 1-20, 22-27 and 37-41 are pending.

WITHDRAWN REJECTIONS

2. All rejections of record over Chan et al. (GB 0106046.6) in the Office Action mailed 8/6/2008 have been withdrawn due to Applicant's arguments in the Paper filed 2/5/2009.

REPEATED REJECTIONS

3. All rejections not based on Chan et al. (GB 0106046.6) are repeated for the reasons of record and repeated below.

Claim Rejections - 35 USC § 103

4. Claims 1-6, 8-9, 12-20, 22-27 and 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. (WO 02/072449) in view of Kaszas et al. (US 5,276,094) and Whitby (US 1,634,924).

Chan ('449) teaches a pharmaceutical dispensing device such as a pharmaceutical metered dose aerosol inhaler for treating asthma having a valve seal (*See p. 1, ll. 1-11 and p. 12, l. 15 to p. 13, l. 13.*), wherein the dispenser has a hydrofluorocarbon propellant comprising propellant type 134a or 227 (*See p. 1, ll. 1-30.*) for dispensing a solution comprising ethanol with a valve body defining a chamber, and a valve member extending through the chamber with at least one annular seal cooperating with the valve members wherein the seal is comprises an isobutylene polymer or co-polymer, butyl rubber, neoprene (polychloroprene), chloro-butyl rubbers,

bromo-butyl rubbers wherein the seal comprises a mineral filler such as silica and talc, processing aids, lubricants, pigments, etc. (*See p. 1, ll. 1-30 and p. 12, l. 15 to p. 13, l. 13. Applicant's invention is interpreted as being a dispensing device and not including materials inside the device.*), however, fails to expressly disclose a cross-linking agent such as sulfur or a sulfur-donating compound free of peroxide curing agents and a polysulphide accelerator derived from a substituted dithiocarbonic acid or derivative thereof or xanthic acid or a derivative thereof having an isopropyl group, with the polysulphide being substantially free from nitrogen, phosphorus and metallic elements, wherein the elastomeric composition comprises up to 3 wt. %/(1.5 wt. %) of the accelerator based on the total weight of the accelerator and polymer in the composition, wherein the weight ratio of the accelerator to the cross-linking agent in the elastomeric composition is in the range of from 1:1 to 3:1.

However, Kaszas ('094) teaches aerosol dispensers with polymeric barrier materials (*See col. 9, ll. 49-55, col. 1, ll. 14-16 and Abstract. Seals are barriers.*), wherein the barrier material is formed from an elastomeric composition comprising an isobutylene polymer or co-polymer thereof (*See col. 3, ll. 51-59.*); a cross-linking agent for the isobutylene polymer or co-polymer thereof, wherein the cross-linking agent is sulphur or a sulphur-donating compound, and wherein the cross-linking agent is free of peroxide curing agents (*See col. 8, ll. 1-9.*); and an accelerator for the cross-linking agent, wherein the accelerator is a polysulphide compound substantially free from nitrogen, phosphorus and metallic elements (*See col. 8, ll. 4-22. Substantially free is interpreted as including some of the elements as no specific value is set forth.*), wherein

the elastomeric composition comprises up to 3.0/(1.5) wt. % of the accelerator based on the total weight of the accelerator and polymer in the composition (*See col. 8, ll. 4-17.*), wherein the weight ratio of the accelerator to the cross-linking agent in the elastomeric composition is in the range of from 1:1 to 3:1 (*See col. 8, ll. 4-17.*) for the purpose of providing a strong seal with very low permeability to gases (*See col. 2, ll. 36-42.*).

Whitby ('924) teaches providing accelerators for the vulcanization of rubber such as polysulphides substituted dithiocarbonic acid or derivatives thereof such as xanthic acids having isopropyl groups with sulfur (*See p. 1, l. 1 to p. 3, l. 63. The claims do not claim a specific accelerator. Dependent claim 8 limits the polysulphide accelerator derived from a substituted dithiocarbonic acid or derivatives thereof per independent claim 1 to be derived from a substituted xanthic acid or derivative thereof. Any metals are removed during synthesis and are not part of the accelerator.*) for the purpose of providing a rubber product with better properties that can be prepared at lower temperatures (*See col. 1, ll. 1-8.*). Furthermore, cross linking agents such as sulfur and accelerators are known ingredients in rubber seal production in order to polymerize the monomers per desired requirements. Additionally, how the seal is made does not matter since the composition of the seal is the same.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to use the above elastomeric composition as taught by Kaszas ('094) and Whitby ('924) in Chan ('449) in order to provide a strong seal with very low permeability to gases.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. (WO 02/072449) in view of Whitby (US 1,634,924), Kaszas et al. (US 5,276,094) and Simons et al. (US 3,443,006).

Chan ('449), Whitby ('924) and Kaszas ('094) teach the seal discussed above, however, fail to expressly disclose wherein the elastomeric composition comprises a chlorine-substituted butadiene polymer/(2-chlorobuta-1,3-diene).

However, Simons ('006) teaches aerosol dispensers with an elastomeric composition comprising a chlorine-substituted butadiene polymer/(2-chlorobuta-1,3-diene) (*See col. 1, ll. 9-16.*) for the purpose of providing a seal with the desired balance of properties to form an effective seal (*See col. 1, ll. 1-5.*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to provide the above chlorine substituted polymer as taught by Simons ('006) in Chan ('449) in order to provide an effective seal with desired properties.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. (WO 02/072449) in view of Whitby (US 1,634,924), Kaszas et al. (US 5,276,094) and Stevenson (US 4,695,609).

Chan ('449), Whitby ('924) and Kaszas ('094) teach the seal discussed above, however, fail to expressly disclose wherein the polysulphide compound is diisopropyl xanthogen polysulphide.

However, Stevenson ('609) teaches polysulphide accelerators wherein the polysulphide compound is diisopropyl xanthogen polysulphide (*See col. 5, ll. 21-23.*) for

the purpose of providing efficient processing without the use of amines or other accelerator materials (*See col. 4, ll. 41-54.*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to use the polysulphide compound of diisopropyl xanthogen polysulphide as taught by Stevenson ('609) in Chan ('449) in order to provide efficient processing without the use of amines or other accelerator materials.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. (WO 02/072449) in view of Whitby (US 1,634,924), Kaszas et al. (US 5,276,094) and Blok et al. (US 6,300,421).

Chan ('449), Whitby ('924) and Kaszas ('094) teach the seal discussed above, however, fail to expressly disclose wherein the polysulphide compound comprises three or more bridging sulphur atoms.

However, Blok ('421) teaches polymerized rubber formulations where the polysulphide compound comprises three or more bridging sulphur atoms (*See col. 6, ll. 54-62.*) for the purpose of providing effective coupling with the other components (*See col. 6, ll. 50-53.*).

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to use a polysulphide compound comprising three or more bridging sulphur atoms as taught by Blok ('421) in Chan ('449) in order to provide effective coupling with the other components.

ANSWERS TO APPLICANT'S ARGUMENTS

8. In response to Applicant's arguments (*See pp. 1-2 of Applicant's Paper filed 2/5/2009.*) regarding Chan et al. (GB 0106046.6), it is noted that said reference is no longer cited, thus, said arguments are moot.
9. In response to Applicant's arguments (*See p. 2, para. 3 to p. 3, para. 2 of Applicant's Paper filed 2/5/2009.*) that Chan et al. (WO 02/072449) is not directed towards reducing the formation of nitrosamines in seals and does not teach the claimed cross-linking agents and accelerators, it is noted that reduced nitrosamine concentration is not a claimed limitation and the Examiner never stated that Chan ('449) teaches reduced nitrosamine concentration in seals or the claimed cross-linking agents, thus, said arguments are not commensurate in scope with the claims.
10. In response to Applicant's arguments (*See p. 4, para. 1 of Applicant's Paper filed 2/5/2009.*) that the linings as taught by Kaszas ('094) are not seals, it is noted that the Examiner did not make such an assertion.
11. In response to Applicant's arguments (*See p. 4, para. 1 of Applicant's Paper filed 2/5/2009.*) that the accelerators as taught by Kaszas ('094) are not desirable for low nitrosamine concentrations, it is firstly noted as discussed above that the claims do not set forth any particular nitrosamine concentration. Furthermore, Kaszas ('094) is not cited for the claimed accelerator but rather Whitby ('924).
12. In response to Applicant's arguments (*See p. 6, para. 3 of Applicant's Paper filed 2/5/2009.*) that Whitby ('924) does not teach using the claimed accelerator in a valve seal and the Examiner should consider the results per Example I at page 16, it is firstly

noted that the Examiner never stated that Whitby ('924) taught a valve seal.

Furthermore, Applicant does not present any analysis of how Example I does or not relate to Whitby ('924) and or precisely what about Example I relates to any of the cited prior art.

13. In response to Applicant's arguments (*See p. 7, paras. 2-3 of Applicant's Paper filed 2/5/2009.*) that Simons ('006) does not relate to the technical field of Kaszas ('094), it is noted that the Examiner does not suggest modifying Kaszas ('094) by Simons ('006) but rather modifying Chan ('449).

14. In response to Applicant's arguments (*See p. 7, paras. 4-5 of Applicant's Paper filed 2/5/2009.*) that since Stevenson ('609) does not relate to pharmaceutical dispensers one can not look to Stevenson ('609) for accelerators, it is noted that Applicant's interpretation of the scope of the available prior art is too narrow as issues involving polymerization of polymers are not limited to the dispenser art but rather are germane across the accelerator and polymerization arts.

15. In response to Applicant's arguments (*See p. 8, para. 1 of Applicant's Paper filed 2/5/2009.*) that since Blok's ('421) compositions are vulcanized together with peroxide it can not teach the limitations of independent claim 1, it is firstly noted that Blok ('421) is cited for teaching claim 11 and not claim 1. Furthermore, Applicant does not precisely address the cited teachings of Blok ('421).

16. In response to Applicant's conclusions (*See p. 8, para. 2 of Applicant's Paper filed 2/5/2009.*) it is noted that Applicant does not precisely set forth any precise argument regarding any cited teaching.

17. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent T. O'Hern whose telephone number is (571)272-0496. The examiner can normally be reached on Monday-Thursday, 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BTO/
Brent T. O'Hern
Examiner
Art Unit 1794
April 15, 2009

/Elizabeth M. Cole/
Primary Examiner, Art Unit 1794